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DATA ON USSR COAL MINING PUBLISHED
IN OBSERVANCE OF MINERS' DAY, 1955

MINERS' DAY SURVEY OF USSR COAL-MINING INDUSTRY -- Moscow, Ugol', No 8, Aug 55

On the occasion of Miners' Day, 1955, the following information is presented on the USSR coal-mining industry.

In 1954, the mining of coal in the USSR was double that in 1940, and coal production was nearly 31 percent above that of 1950. During the first 6 months of 1955, hundreds of thousands of tons of coal above plan were extracted. The average daily output during this period has increased to 12.5 percent over that of the corresponding period of last year. For example, in the Donbass the increase was 13.5 percent, in the Kuzbass 14.1 percent, and in Karaganda 15.6 percent. The following combines exceeded the half-year plan for the mining of coal: Moskvougol', Chelyabinskugol', Sverdlovskugol', Ukrburugol', Intaugol', Sredazugol', Vostsibugol', Primorskugol', and Gruzugol'.

According to the Ministry of Coal Industry USSR, the half-year plan for labor productivity has been achieved. Such productivity has increased to 4.5 percent above that of the corresponding period of last year.

In accordance with instructions of the 19th Party Congress, during the years of the Fifth Five-Year Plan a great deal of attention was given to the mechanization of loading coal at the faces, the loading of coal and rocks during preliminary mining, and the construction and utilization of new kinds of supports in cleared places.

At present, there are 1,240 coal combines in operation in the mines of the USSR. As a result, 2 1/2 times as much coal was extracted by mechanized loading in 1955 as in 1950. During the first 6 months of 1955, nearly 24 percent more coal was mined by the combines as in the first 6 months of last year. This in turn had a great effect on labor productivity. By the end of 1955, the level of mechanization of coal mining will reach approximately 40 percent in the Donets Basin, 52 percent in the Kuznetsk Basin, and 75 percent in the Karaganda Basin.

For the mechanization of preliminary mining operations, coal- and rock-loading and cutting combines have been produced and installed in the mines. More than 3,000 loading machines and more than 100 cutting combines are now operating in the mines of the USSR. In 1954, more than 1,050 kilometers of basic horizontal mining were cut through, because of the mechanization of loading operations. It was intended to bring the level of mechanized cutting in the mines of the Donbass up to 72.5 percent in 1955, in the Kuzbass to 88 percent, and in Karaganda to 92 percent. During the first 6 months of 1955, the volume of mechanized cutting increased to nearly 16 percent above that of the same period of last year.

During 1955, the change-over of machines to automatic and remote control is to be considerably expanded. By the end of 1955, such controls will be introduced for 150 stationary conveyer lines, 3,000 pumps and 120 pump units of the main drainage system, and 230 ventilator units of the main ventilating system.

New kinds of supports, especially mechanized in cleared faces, are being created and introduced. A metal type of support is now being used in 1,050 faces, among which there is a special organ-pipe supporting structure, which is being used in 150 faces. In 1955, mechanized portable supports and

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organ-pipe walls with a mechanized movement will be adopted for the first time on an industrial scale. The introduction of metal organ-pipe walls will also be considerably expanded.

The national economy of the USSR is developing very rapidly, and, despite the fact that more coal was mined in 1955 than was specified by the Five-Year Plan, the country foresees a fuel deficiency. In the first 6 months of 1955 six combines and the Ministry of Coal Industry Ukrainian SSR did not fulfill the plan. Kuzbassugol', Vorkutugol', Tulaugol', and Molotovugol' coal combines and the Ministry of Coal Industry Ukrainian SSR were short great amounts of coal. For the first 6 months of 1955, 360 mines and pits did not fulfill the plan. This resulted in the USSR not receiving 5,250,000 tons of coal.

For the first 6 months of 1955, preparatory mining operations were fulfilled 95.6 percent.

The decision of the July Plenary Session of the Central Committee CPSU indicated a necessity for rapid utilization of the rated capacities of the individual mines. During the years of the Fifth Five-Year Plan, many new industries were put into operation in the coal industry. However, the utilization of their rated capacities and the rated capacities of those mines turned over for operation during preceding years is being accomplished very slowly. In all coal basins, however, many mines have exceeded their rated capacities.

Soviet designers have conducted work on the creation of a series of machine combines for cleaning operations. They have been introduced into the following basins: in the Donbass in 45 percent of the faces, in the Kuzbass in 30 percent of the faces, and in the Moscow Basin in 10 percent of the faces.

Up to the present, no machine combines have been developed for the mining of strata with loose tops and stone-covered layers requiring a separate excavation, for the mining of sloping strata of moderate thickness, or for the mining of thin strata containing hard and viscous coal. Furthermore, no machines have been created or introduced for the cutting of faces, caverns, or crosscuts, or for the mechanization of preliminary mining in many of the mines of the Moscow, Kuznetsk, and other basins.

Mine No 2-7 of the Stalinugol' Trust (Donbass) fulfilled its plan for the mining of coal during the first 6 months of 1955. In 10 out of 13 faces of this mine, machine combines were in operation and 95 percent of the coal mining was accomplished with mechanized loading. The Donbass combine mined more than 7,430 tons of coal during May 1955. This is 40 percent higher than the entire Donbass area. On the other hand, Mine No 5-bis, of the same trust, mined only 3,740 tons of coal during the same month.

As a result of open-pit mining, the productivity of labor is five times as great and the cost of production is less than one third what the cost was when mining was by the underground method. The utilization of open-pit mining during the Fifth Five-Year Plan has nearly doubled.

DEPUTY MINISTER GRAFOVYM DISCUSSES COAL INDUSTRY: -- Moscow, Trud, 28 Aug. 55

In 1954, coal mining in the USSR was more than double that of 1940, and was almost 34 percent above that of 1950. Daily mining of coal during the first 7 months of 1955 was 12.9 percent over that of the corresponding period of 1954. During 1955, a total of 390 million tons of coal will be mined. The current tempo of development indicates that the USSR can attain an annual production of 500 million tons of coal earlier than the end of the next 5-year plan.

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The mechanized loading of coal in the first half of 1955 was almost 24 percent more than in the first half of 1954. Three thousand loading machines and more than 100 cutting combines are operating already. It is planned to attain a level of mechanized cutting in the Donbass in 1955 of 72.5 percent and in the Kuzbass of 88 percent.

The cyclical method of work, which originated in the mines of the Donets Basin, is a tested and reliable means for increasing coal extraction. This type of work organization creates a proper atmosphere for production and makes operations at enterprises run smoothly. As a result of converting to a schedule in faces of Rostovugol Combine, coal mining here has been doubled and labor productivity has increased up to 1 1/2 times.

Working of coal deposits by the open-pit process is of great importance for increasing labor productivity and lowering the cost price of coal. The application of this method in the Donbass has resulted in an increase in labor productivity to five times the previous level and in lowering the cost price to less than one third the former level. Open-pit mining in the period of the Fifth Five-Year Plan has almost doubled already. In many basins of the country, large-scale construction of highly mechanized coal pits has been undertaken.

Particular attention is being paid to new and more effective engineering operation of coal deposits. In the Kuznetsk Basin, fuel is already being mined at two mines by the hydraulic process. The construction, in the next few years, of entire hydrocomplexes in all basic coal basins is being contemplated. Operations for the sub-surface gasification of coals are also being conducted.

This year, large-scale construction of new coal-mining enterprises is being carried out. This will result in the putting into operation of 159 new mines with a total capacity of more than 47 million tons. --From an interview with L. Ye. Grafovym, Deputy Minister of Coal Industry USSR

PROGRESS IN USSR COAL MINING DISCUSSED BY DEPUTY MINISTER ONIKA -- Moscow, Bloknot Agitatora, No 23, Aug 55

A great role in developing heavy industry belongs to the coal industry, since coal makes up more than 77 percent of the country's fuel balance. At present, there are more than 1,000 different kinds of combines operating in the USSR. As a result, mechanized loading of coal in 1954 amounted to 58 million tons of coal, or 2 1/2 times as much as was mined in 1950 by mechanized loading. At the end of 1955, mechanized coal loading in such coal basins as Donets, Kuznetsk, and Karaganda will amount to 40, 52, and 74 percent, respectively.

In preparatory mining, coal- and rock-loading machines and cutting combines are being used for mechanized loading. At present, there are about 3,500 loading machines and 150 cutting combines in USSR mines. In 1954, with mechanized loading of coal and rock, more than 1,100 kilometers of initial horizontal cutting were made, i.e., almost twice as much as in 1950. This year, 1,430 kilometers of cutting operations will be carried out and mechanized cutting of initial mining will reach 55 percent.

In the Moscow Basin, at Mines No 35 and 36 Shirino-Sokol'nicheskii, No 3 Grankovskii, No 2-bis Kamenetskiy, No 67 Zhdankovskii, and others, more than half of all initial cutting was done with the aid of cutting combines PK-2M. Use of cutting combines at these mines permitted increasing speed in cutting through dug drifts to 2 1/2-3 times as much as before. This will significantly expand mining work, which will amount to 1 1/2-2 times the planned capacities.

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At mines throughout the country, new kinds of supports, particularly mechanized supports in cleared stopes, are being used more extensively. Metal supports are being used in more than 950 faces. Of this number, special supports are being used in more than 100 faces to prevent roof collapse. Individual mines in the Moscow Basin are conducting experimental operations for adapting metal shields (shchit). This will allow a sharp reduction of expenditure for timber support and will provide mechanization of the most laborious process of operation in faces, namely, strengthening and preventing roof collapse.

Coal mining in 1954 was more than doubled that of 1940, and 54 percent above that of 1950. In 1955, more than 390 million tons of coal will be mined. In the first half of 1955, hundreds of thousands of tons of coal were mined above plan, and average daily mining of coal increased to 12 percent over that of the first half of 1954.

In the Moscow Coal Basin, daily mining of coal now amounts to more than 100,000 tons; this is almost four times as much as in 1940. During the first 6 months of 1955, more than 126,000 tons of coal were mined above plan in the Moscow Basin.

During fulfillment of the mining plan throughout the coal industry, 6 out of 16 combines did not fulfill the state plan for the first half of 1955. Of 57 mines of Moskvougol' Combine, 25 did not fulfill the plan, thus, the combine fell behind in coal deliveries to the state by more than 100,000 tons.

In a report to the July Plenum of the Supreme Soviet CPSU, N. A. Bulganin reproached miners for the fact that labor productivity in the coal industry lags behind the growth in technical competence of the workers.

The workers' labor productivity in mining coal increased to 7 percent above prewar labor productivity; but in the Donbass and Kuzbass, it did not attain the prewar level. At the Moskvougol' Combine, where labor productivity increased to 33 percent over the prewar level, many mines are not fulfilling the plan for labor productivity. As a rule, these mines do not fulfill the plan for coal mining, and they attain planned capacity very slowly.

New mining towns, appearing on the map of the Moscow Coal Basin, are Severo-Zadonsk and Kimovsk, and the large mining villages of Dubovka, Sokol'nika, and others. -- D. Onika, Deputy Minister of Coal Industry USSR

DEPUTY MINISTER BRATCHENKO DISCUSSES COAL-MINE MECHANIZATION -- Moscow, Sovetskiy Flot, 28 Aug 55

The coal industry is of primary importance for developing heavy industry and other branches of the national economy. Coal accounts for more than 77 percent of the country's fuel balance. Each year, the importance of coal as a raw material for the chemical industry continues to grow.

The mines of the USSR are being supplied with more and more cutting and coal- and ore-loading machines and powerful electric locomotives. Whereas in 1940 a total of 24 coal combines were operating at mines of the Ministry of Coal Industry, in 1954 there were 1,600; and whereas in 1940 there were 36 rock-loading machines, there now are more than 3,000. During this time, the number of electric locomotives in underground workings increased to almost six times the previous figure. During the post-war years alone, about 200 different kinds of mining machines were manufactured.

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The open-pit mining process which has developed in recent years is one of the new methods of working coal deposits. The attention given this progressive method is explained by its advantages over the underground method. Complex mechanization can be reached more easily at coal pits. Here excavators of different designs are used, including large 20-cubic-meter walking bridges for open-cut mining, powerful electric and steam locomotives of wide gauge, automatic dump trucks, self-propelled scrapers, bulldozers, and other machines. As a result, labor productivity at open-pit mines is three to four times as high as at subterranean mines, and the cost price of coal is less than half. At present, extracting coal by the open-pit process is being used extensively in Sverdlovskaya and Chelyabinskaya oblasts, in Karaganda, and in the Ukraine.

The hydraulic method is still another means of extracting coal which is being developed and perfected. Breaking down of coal from seams by jets of water under great pressure permits the elimination of many laborious processes and lowers expenses for mining operations by several times. In addition, miners are freed from other laborious physical work since the jets of water not only remove the coal but also deliver it to the surface.

Underground gasification of coal has a great future. By continuous burning of coal underground, it is possible to obtain high-quality fuel gas and use it in fireboxes of electric power stations. Mines of underground gasification are already working in the Donets and Moscow basins, and this method will soon be extended to other coal regions in the country.

In recent years, a new branch of the coal industry has assumed greater importance, namely, the mechanical cleaning and briquetting of coal. At present, high coking coals in the principal basins of the country are being mechanically washed.

Not long ago, the coal combine KS-2-m was designed for working in flat-dipping seams of 2-meter thickness. This aggregate mechanizes all processes of mining coal from a face. It contains a cutting machine, loading conveyers, and metal portable supports. The combine's volume per shift is more than 600 tons of coal.

This year, seven new kinds of combine for cleaning excavations will be manufactured. The first group of the new combine Donbass-2, intended for working especially hard and tough coals in seams of a flat and inclined stratification, have already been delivered. Planned capacity of the machines is up to 200 tons of coal per hour. A mine-development combine has passed tests undertaken by designers of the Toretskiy Plant. Its capacity is 250 meters per month. The Leningrad Plant "Inevmatika" has started manufacture of the UB-1 drilling machine. The new drilling hammer PT-45P was manufactured for use on hard coal.

Machine-building designers of Ysinovatskiy Mining Equipment Plant manufactured the first grab bucket aggregate PGA-3, which permits mechanizing all heavy labor operations during sinking of vertical mine shafts to a depth of up to 1,000 meters, including removal of rock, raising of temporary and permanent bracings, and lowering building materials. The monthly capacity of the machine is 120 meters of prepared shaft 6.5 meters in diameter. -- P. Kratchenko, Deputy Minister of Coal Industry USSR

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HYDROMECHANIZATION IN USSR OPEN-PIT COAL MINING -- Alma-Ata, Kazakhstanskaya
Pravda, 3 Jul 55

Tens of millions of tons of coal are mined with the aid of water. Powerful jets of water which issue from hydromonitors are used to break down a seam. The water carries the crushed coal through special pipes to the cleaning plants. This process of extracting fuel permits the elimination of many labor-consuming operations and the reduction by several times of the expenses in carrying out mining operations.

The use of hydromechanization is especially profitable in places where surface stratifications of coal seams occur. In coal pits of the Kuzbass, Central Asia, and the Far East, where the new method of extracting fuel is being widely introduced, labor productivity of miners is higher by far than in subterranean mines. For example, at Baturinskiy Pit No 3 of the Chelyabinskugol' Combine, mining on a single work shift exceeds 10 tons of coal. This is from five to six times as much as in underground faces. Two coal-cleaning installations alone of the Korkunskiy Pit of that combine yield more than 20,000 tons of concentrate monthly. In addition, the production cost of coal here is only from one fourth to one fifth the cost of underground mines. The use of hydromechanization at open-pit sections of the country's coal enterprises resulted this year in savings amounting to several hundred million rubles.

Hydromechanization of open-pit coal mining is being expanded still more this year. Tens of new hydromechanized pits are being constructed in the Ukraine, the Far East, and in the Moscow area. Construction on the Angren Pit in Uzbekistan has been started.

The Kuzbass coal pits Gramotenskiy, Kedrovskiy, Krasnogorskiy, Novobacharskiy, Susnovskiy, Khoroshevskiy, and others are being fitted with powerful hydroinstallations, dehydrating elevators, sieves, and washing troughs.

The volume of hydraulic open-pit mining will soon be almost triple what it was in 1954.

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